R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE CLAIMS

Independent claims 11 and 15 have been amended to clarify the feature of the present invention whereby the main control unit senses an initial change to an on state in the operation signal and provides an instruction to cause the image pickup element to start to pick up the image of the object when the on state is sensed once.

In addition, independent claims 21 and 22 have been amended in a similar manner to recite sensing an initial change to an on state in the operation signal, and then instructing an image pickup element to pick up an image of an object when the on state is sensed once.

Still further, new claims 23-29 have been added to more clearly recite the subject matter of canceled claims 5-10 and 20, respectively, in better U.S. form.

No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered.

THE PRIOR ART REJECTION

Claims 1-20 were all rejected under 35 USC 102 or under 35 USC 103 as either being anticipated by JP 2002-199288 ("Hitoshi") or as being obvious in view of the combination of Hitoshi with one or more of US 2002/0037747 ("Ueno") and JP 2002-101331 ("Tatsuya"). These rejections, however, are respectfully traversed with respect to the claims as amended hereinabove.

According to the present invention as recited in independent claims 11 and 15 an image pickup apparatus is provided which comprises an image pickup element for picking up an image of an object, a shutter key for producing an operation signal when depressed, and a main control unit for directly receiving the operation signal produced by operating the shutter key. As recited in amended independent claims 11 and 15, the main control unit senses an initial change to an on state in the operation signal and provides an instruction to cause the image pickup element to start to pick up the image of the object when the on state is sensed once, and the main control unit determines that the shutter key is released when an off state of the operation signal is sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time.

According to the present invention as recited in amended independent claims 21 and 22, moreover, an image pickup method is

provided which comprises directly receiving an operation signal produced by depression of a shutter key, sensing an initial change to an on state in the operation signal and then instructing an image pickup element to pick up an image of an object when the on state is sensed once, and determining that the shutter key is released when an off state of the operation signal is sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time.

That is, according to the present invention as recited in amended independent claims 11, 15, 21 and 22, when an initial change to an on state in the operation signal is sensed, an instruction to cause the image pickup element to start to pick up the image of the object is provided when the on state is sensed once (see line 4 in Fig. 2B). However, the shutter key is determined to be released when an off state of the operation signal is sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time (again, see line 4 in Fig. 2B). In other words, the shutter key is determined to be depressed immediately upon sensing an initial change to the on state in the operation signal, but the shutter key is determined to be released only when the off state of the operation signal is sensed successively a predetermined number of times. With this structure, time lag in initiating an image pick up operation is eliminated, while erroneous detection

of release of the shutter key is avoided. See the disclosure in the specification at page 11, line 23 to page 14, line 16.

On pages 7-8 of the Office Action, the Examiner acknowledges that Hitoshi is silent with respect to the feature of the present invention whereby the main control unit determines that the shutter key is released when an off state of the operation signal is sensed successively a predetermined number of times by sampling the operation signal at predetermined intervals of time. For this reason, the Examiner cites Tatsuya for the disclosure of sampling an operation signal a predetermined number of times at predetermined intervals.

It is respectfully pointed out, however, that (as recognized by the Examiner) Tatsuya discloses sampling an operation signal a predetermined number of times at predetermined intervals for the purpose of distinguishing between a still image mode and a continuous shooting mode. And it is respectfully submitted that Tatusya does not at all disclose, teach or suggest the combination of features of the claimed present invention whereby the main control unit determines that the shutter key is depressed immediately upon sensing an initial change to the on state in the operation signal, but determines that the shutter key is released only when the off state of the operation signal is sensed successively a predetermined number of times. As pointed out above, with this structure, time lag in initiating an

image pick up operation is eliminated, while erroneous detection of release of the shutter key is avoided. And it is respectfully submitted that Tatusya does not at all disclose, teach or suggest these features or advantageous effect of the present invention as recited in amended independent claims 11, 15, 21 and 22.

Accordingly, it is respectfully submitted that even if the teachings of Hitoshi and Tatsuya were combinable in the manner suggested by the Examiner, the structure of the present invention as recited in amended independent claims 11, 21, 15 and 22 would still not be achieved or rendered obvious.

With respect to new claims 23-29, moreover, it is respectfully pointed out that new independent claims 23 and 29 more clearly recite the features of the present invention whereby a main control unit (operation) is directly connected to the shutter key for sensing an on state of the first operation signal and for instructing the image pickup element to start to pick up the image of the object when the on state of the first operation signal is sensed, and whereby a sub control unit (operation) is connected to a key switch for sensing an on state of the second operation signal and for delivering information on the sensed on state of the second operation signal to the main control unit. That is, according to the present invention as recited in new independent claims 23 and 29, the first operation signal produced by the shutter key is directly inputted to the main control unit,

whereas the second operation signal produced by the key switch is inputted into a sub control unit. With this structure, since the first operation signal produced by operating the shutter key is directly inputted to the main control unit (without going through the sub control unit), time lag is virtually eliminated. See the disclosure in the specification at page 14, lines 17-21.

On page 6 of the Office Action, the Examiner acknowledges that Hitoshi does not teach a sub control unit for receiving a second operation signal produced by depressing a key switch, for sensing an on state of the second operation signal, and for delivering information on the sensed on state of the second operation signal to the main control unit. For this reason the Examiner has cited Ueno for the disclosure of a sub control unit.

It is respectfully pointed out, however, that in Ueno both the shutter switch 64 and the operation unit 70 are connected to the system control unit 50. See Fig. 1 of Ueno.

Accordingly, it is respectfully submitted that even if the teachings of Hitoshi and Ueno were combinable in the manner suggested by the Examiner, the features of the present invention as recited in new independent claims 23 and 29, whereby the shutter key is directly connected to the main control unit (operation) whereas the key switch is connected to a sub control unit (operation), would still not be achieved or rendered obvious.

In view of the foregoing, it is respectfully submitted that the each of amended independent claim 11, 15, 21 and 22, and new independent claims 23 and 29, as well as each of claims 12-14, 16-18 and 24-28 respectively depending from claims 11, 15 and 23, all clearly patentably distinguish over the cited references, taken singly or in any combination, under 35 USC 102 as well as under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

/Douglas Holtz/

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